			OR	DER FO	OR SUPPI	LIES OR S	SEI	RVICES	;			1	PAGE 1 OF 16
1 CONTRACT/PURCH ORDER/ AGREEMENT NO N65540-15-D-0005 2 DELIVERY ORDER/ CALI			ER/ CALL NO	NO 3 DATE OF ORDER/CALL 4 REQ / PURCH REQUEST NO (YYYYMMMDD) 2016 Jul 14 1300579719			5 P	RIORITY					
6 ISSUED BY NAVAL SURFA (b) (6) 5001 SOUTH BE PHILADELPHIA	ROAD ST	REET	CODE	N 64498	D C M 2000	DMINIST EREI A HAMPTON ENTERPRISE P PTON VA 23666	PARE		han 6)	CODI	S5111A		DELIVERY FOB X DESTINATION OTHER Gee Schedule if other)
NAME THO	ERAL D' MAS J. T JERMAI	TERNES	I RD		OGY,	FACILIT Y			SEE S	LIVER TO FO	4S		MARK IF BUSINESS IS SMALL SMALL DISADVANTA GEE WOMEN-OWNED
										AIL INVOI tem 15	CESTO TH	IE ADDRES	S IN BLOCK
14 SHIP TO NAVAL SURFA (h) (A) NSWC PHILAD NSLC DETACH 1601 LANGLEY PHILADELPHIA	ELPHIA MENT	DIVISIO		64498	DFAS P.O.	AYMENT WI S COLUMBUS C BOX 182264 JMBUS OH 4321	ENT	ER,SOUTH		CODE HQ	338	II	MARK ALL ACKAGES AND PAPERS WITH DENTIFICATION NUMBERS IN LOCKS 1 AND 2.
16 DEL TYPE CAL	IVERY/ L	Х	This delivery orde	r/call is issued	on another Gove	ernment agency or	in ac	ccordance witl	h and su	bject to terms	and condition	s ofabove num	bered contract
OF PUR	CHASE		Reference your qu Furnish the follow		pecified herein F	REF:							
NAME O If this box 17 ACCOUNT	is mark	RACT	OR oplier must sign	Acceptance	SIGNATU	AGREES TO I	PER	FORM TH	E SAM				DATE SIGNED (YYYYMMMDD)
18 ITEM NO			19 SCHEDU	LE OF SUP	PLIES/ SERVI	ICES		20 QUAN' ORDER ACCEP	RED/		22 UNI	T PRICE	23 AMOUNT
				SEE SCH								_	
* If quantity accept quantity ordered, quantity accepted	indicate	by X. If	different, enter ac	TEL:(h)		AMERICA		(b) (6		ORDERING OF	RICER	25 TOTAL 26 DIFFERENCE	
27a QUANTI	TYINC		IN 20 HAS BE	EN CCEPTED, A		RMSTO THE		confidence		JAPAN 110 01	Tonk	DITERENCE	
b SIGNATUR	E OF A	UTHO	RIZED GOVER	RNMENT RE	EPRESENT A	TIVE		DATE (YYYYMMMD				ND TITLE RESENTATI	OF AUTHORIZED VE
e MAILING	ADDRES	SS OF A	AUTHORIZED	GOVERNM	ENT REPRE	SENT AT IVE	28	SHIP NO		29 DO VO	JCHER NO	30 INITIALS	
f TELEPHON	NE NUM	IBER	g E-MAIL	ADDRESS			╁	PARTIA FINAL	AL	32 PAID B	Y	33 AMOU CORRECT	NT VERIFIED FOR
						34 CHECK	NUMBER						
a DATE (YYYYMMMDD)	b SIGN	NATUI	RE AND TITL	E OF CERTI	IFYING OFFI	CER		PARTIA				35 BILL O	F LADING NO
37 RECEIVED) AT	38	RECEIVED BY	7	39 DATE:	RECEIVED	40	TOTAL CONTAIN		41 S/R ACC	OUNT NO	42 S/R VO	OUCHER NO

Section B - Supplies or Services and Prices

ITEM NO 0002	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT (b) (6)						
0002	Engineering Services				() ()						
	CPFF FOB: Destination										
			ESTIM	MATED COST							
				FIXED FEE							
			TOTAL EST	COST + FEE	(b)						
ITEM NO	CLIDNI IEC (GEDI II GEG	OLI ANITHTY	LDUZ	LINUTE DELICE	AMOUNT						
ITEM NO 0002AA	SUPPLIES/SERVICES	QUANTITY 1	UNIT Lot	UNIT PRICE	AMOUNT (b) (4)						
		Holding SLIN for CLIN 0002									
	CPFF This priced SLIN is a holding SLIN for administrative purposes. This SLIN will be reduced with every additional incremental funding modification. The unfunded ceiling under CLIN 0002 is (b) (4) FOB: Destination										
			TOTAL EST	COST + FEE	(b) (4)						
ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT						
0002AB		1	Lot		(b) (4)						
	Funding for CLIN 0002 CPFF FOB: Destination PURCHASE REQUEST NUMBER: 1300579719										
	ESTIMATED COST FIXED FEE										
	ACRN AA CIN: 130057971900005		TOTAL EST	COST + FEE	(b) (4)						

N65540-15-D-0005 0012 Page 3 of 16

ITEM NO SUPPLIES/SERVICES QUANTITY **UNIT UNIT PRICE AMOUNT** (b) (4) 0004 Support Costs COST FOB: Destination **ESTIMATED COST** ITEM NO SUPPLIES/SERVICES QUANTITY UNIT **UNIT PRICE AMOUNT** 0004AA (b) (4) Lot 1 Holding SLIN for CLIN 0004 **COST** This priced SLIN is a holding SLIN for administrative purposes. This SLIN will be reduced with every additional incremental funding modification. The unfunded ceiling under CLIN 0004 is (b) (4) FOB: Destination **ESTIMATED COST** ITEM NO SUPPLIES/SERVICES **QUANTITY UNIT UNIT PRICE AMOUNT** 0004AB (b) (4) Lot 1 Funding for CLIN 0004 **COST** FOB: Destination PURCHASE REQUEST NUMBER: 1300579719 ESTIMATED COST ACRN AA CIN: 130057971900006 ITEM NO SUPPLIES/SERVICES **QUANTITY UNIT UNIT PRICE AMOUNT** (b) (4) 0005 1 Technical Data GFM & CDRLs - (b) (4) FOB: Destination **FFP NET AMT**

LABOR CATEGORY	GDIT	
	ST/OT	
Program Manager	(b) (4)	
Electronic Tech		
Site Foreman		
Marine Equipment Mechanic		
Shipfitter/Welder		
QA Tech		
Marine Electrician		
Maint. Trades Helper		
Logistician		
Clerk/Typist		
Systems/Program Analyst		
Total Hours	11,988/2,04	40

Labor - (b) (4) Fee - (b) (4) Total Labor & Fee - (b) (4) ODC - (b) (4) Total - \$1,150,869.53 Section C - Descriptions and Specifications

STATEMENT OF WORK

CONTRACT NO. N65540-15-D-0005 PATROL COASTAL (PC) SCALABLE INTEGRATED BRIDGE SYSTEM (S-IBS), NAVIGATION SUITE INSTALLATION and VMS UPGRADE SUPPORT STATEMENT OF WORK

1.0 BACKGROUND

1.1 The In-Service Engineering Agency (ISEA) at Naval Surface Warfare Center, (NSWC) Code 2130, in support of the US Navy's Sustainment and Modernization initiatives, requires support for the installation of SCD 78042 Scalable Integrated Bridge System (Scalable IBS), SCD 78268 Navigation Suite Upgrades and support during SOVT for three (3) Patrol Coastal (PC) ships.

2.0 SCOPE

- 2.1 Provide integration, installation, engineering testing and technical support services for the installation of the Navigation Suite (NAV) and Scalable IBS aboard three PC ships, in support of the Sustainment and Modernization Department (Code 2130) of the Naval Surface Warfare Center, (NSWCPD), and Philadelphia, PA. The planned location for the installation services is Mayport, Florida.
- 2.2 The contractor shall accomplish the complete installations in accordance with NAVSEA Standard Items and all referenced applicable documentation.
- 2.3 The contractor shall provide technical support during the ship checks, installation, integration and test phases. The contractor shall assist in the resolution of discrepancies as they may occur or are identified during the availability.

3.0 APPLICABLE DOCUMENTS

- 3.1 MIL-STD-2042A (SH) Fiber Optic Topology Installation Standard Methods for Naval Ships (Equipment/Connectors and Inter-connectors).
- 3.2 NAVSEA S9AA0-AB-GS0-010/GS0, General Specifications for Overhaul of Surface Navy Ship.
- 3.3 MIL-STD-454, Standard General Requirements for Electronic Equipment.
- 3.4 MIL-STD-1310 (Navy) Bonding and Grounding.
- 3.5 OPNAV Instruction 5100.23B, Navy Occupational Safety and Health (NAVOSH) Program Manual.
- 3.6 Standards and Interpretations, Occupational Safety and Health Chapter 1915.14, 1915.15 and 1915.16.
- 3.7 NAVSEA SL720-AA-MAN-020 FMP Management and Operations

	Manual
3.8	NAVSEA 9090-310G SHIPALT by Alteration Installation Team
3.9	NAVSSES Installation 4720.2E Process and Policy for Shipboard
	Industrial Work
3.10	MIL-STD-24749, Electrical Grounding, General Specifications
3.11	MIL-DTL-22520G, General Specification for Crimping Tools and Wire
	Termination.
3.12	NAVSEA 0967-LP-000-0110 Electronics Installation and Maintenance Book,
	Installation Standards
3.13	Government Furnished Material Listing (RFQ Timeline)
3.14	MIL-STD-248, Welding and Brazing Procedures and Performance Qualification.
3.15	MIL-STD-0022, Welded Joint Design
3.17	NAVSEA S9086-VD-STM-000/CH-631, Painting.
3.20	NAVSEA STANDARD ITEMS FY2016
3.21	ANSI/ASQC Q9002-1994, Quality System, Model for Quality Assurance in
	production Installation, and servicing.
3.23	423-8678472 ECDIS-N SYSTEM UPGRADE INSTALLATION BLOCK
	WIREING DIAGRAM
3.24	(b) (2) ECDIS-N INSTALL LIST OF CONNECTIONS
3.25	ECDIS-N UPGRADE FOUNDATION MODIFICATIONS
3.26	POWER SYSTEM MODIFICATIONS ECDIS-N
3.27	MISC ARRANGEMENT MODS INCIDIENTAL TO ECDIS-N
	SYSTEM UPGRADE
3.28	(b) (2) REMOVALS INCIDENTAL TO ECDIS-N SYSTEM UPGRADE
3.29	POWER SYSTEM MODIFICATION NAV UPGRADE
3.30	NAV SUITE ^(b) (2) AUTOPILOT UPGRADE
3.31	NAV SUITE AUTOPILOT UPGRADE LIST OF
	CONNECTIONS
3.32	(b) (2) GYROCOMPASS (b) (2) UPGRADE REMOVALS
3.33	MK27F GYRO LIST OF CONNECTIONS
3.34	MK27F GYRO COMPASS BLOCK WIRING DIAGRAM
3.35	(b) (2)
3.36	(b) (2)
3.37	MISC ARRANGEMENT INCIDENTAL TO NAV SUITE MOD
3.38	(b) (2)
3.39	BOLTING OF ELECTRICAL EQPT
3.40	NAVIGATION SUITE UPGRADE FOUNDATION MODS

4.0 **REQUIREMENTS**

4.1 In support of the NAV and Scalable IBS Installations, the contractor shall participate in ship checks and review all referenced installation drawings in order to gain a complete understanding of material procurement, pre-fabrication, and installation requirements. The contractor should be aware that the specifics of the installation may change from ship to ship. The government will provide ship-specific drawings for each hull as they are issued by the planning yard.

- 4.2 Using NAVSEA Standard Items and refs 3.8 & 3.9, the contractor shall develop a QA Workbook for each installation to be maintained and updated on-site. These Workbooks shall be used to keep an in-process record of Quality Control Inspections and be provided to NSWC for review, thirty (30) days prior to the start of an installation. A completed copy of the QA Workbook shall be provided to NSWCPD 2130 personnel within two weeks after completion of each installation. The QA Workbook must be accessible and viewable to NSWCPD onsite personnel during the entire availability and formatted as follows:
 - Sect. 1 Alteration Description
 - Sect. 2 Personnel Qualifications and Certifications
 - Sect. 3 QA System Letter and Company procedures
 - Sect. 4 Installation POA&M
 - Sect. 5 Ship Installation Drawing (SID) List
 - Sect. 6 Work Package/Test and Inspection Plan/Records This plan should identify areas requiring In-Process inspections by annotating steps as (I), (V), or (G) Points. This plan shall also incorporate all testing requirements.
 - Sect.7 Test and Inspection Records
 - Sect.8 Alteration Completion Report
- 4.3 The contractor shall prepare, and maintain daily, a detailed installation milestone schedule (POA&M) based on the ship's availability. The contractor shall update this POA&M as schedules change, workflow problems occur, or other conditions warrant. The details of this POA&M will be coordinated with Ship's Force, NSWC OSIC representative, and other activities as necessary to ensure that proper support is available and interference or delays are minimized.
- 4.4 The contractor shall order, stage, and store all contractors' miscellaneous installation material. Material staged on-site during the installation must be done in accordance with NAVSEA standard items and local shipyard standard items and regulations.
- 4.5 Utilizing the installation drawings, the contractor shall develop a material list detailing all material, IAF and consumable, required to complete the installation of Scalable IBS and the NAV upgrades.
- 4.6 The contractor shall provide storage for Government Furnished Material (GFM), including installation check out spares, as determined by the Government and provided for in the applicable installation documentation. The contractor shall also provide for the transportation of material between the contractor's storage facility and ship. The contractor shall maintain identity of all items of material associated with the ship using DD form 1149's. The contractor shall maintain and update a database detailing status of material. This status will include material nomenclature, part number, quantity, location, installed date and person issued to.

- 4.7 The contractor shall provide the necessary facilities, equipment, tools and trained trade personnel to support installation and testing of all the Scalable IBS and NAV upgrades equipment. In accomplishing this work:
 - 4.7.1 Contractor shall provide the services of one (1) senior installation technician for a ship check approximately 30 days prior to installation on each ship for the purpose of identifying cable runs and pre-fabrication requirements and generating red line drawings on the applicable installation drawings.
 - 4.7.2 Contractor shall maintain a daily work schedule and coordinate all work with Ship's Force, RMCs and NSWCPD representatives.
 - 4.7.3 Contractor shall ensure work scheduled and accomplished meets requirements of POA&M discussed in paragraph 4.3. All POA&M discrepancies and updates shall be coordinated and discussed with NSWCPD on-site representative as they occur. The POA&M shall only be updated if the Contractor and NSWCPD on-site representative concur with the change. Any discrepancies or updates having a direct impact on budgeted cost, delivery order period of performance, or actual scope of work shall be brought to the immediate attention of the Contracting Officer Representative (COR) and Contracting Officer (CO) for proper disposition.
 - 4.7.4 Contractor shall obtain, ship, and stage all work-site Installing Activity Furnished (IAF) incidental material necessary for each stage of the installation.
 - 4.7.5 Contractor shall ensure all trade personnel meet minimum requirements as specified within NAVSEA Technical Specification 9090-310G and shall have technical skill license or certifications available upon request.
 - 4.7.6 Contractor shall provide technical support during the installation, integration and test phases to assist in the resolution of Scalable IBS and NAV upgrades discrepancies as they may occur or are identified during the availability. A core group of three (3) personnel experienced in Scalable IBS and PC navigation suite operation shall be made available, as required, during the installation, where applicable.
 - 4.7.7 Contractor shall ensure compliance with all applicable safety regulations.
 - 4.7.8 Contractor shall conform to shipboard routine with regard to cleanliness, personnel conduct, and ship's security and integrity after each installation day.
 - 4.7.9 Contractor shall perform a validation check of all cables to confirm cable

- origin and destinations. This validation check shall consist of a continuity test for copper cables and light test for fiber cables per reference 3.1. Fiber cables shall also be tested prior to the installation to ensure that no breaks in continuity exist.
- 4.7.10 Contractor shall perform a continuity test for all copper wiring to ensure leads have been terminated at the proper pin-out location inside the actual connector.
- 4.7.12 Contractor shall test and checkout any other disturbed or restored systems, if applicable.
- 4.7.13 Contractor shall test and check out functionality of all installed measuring devices, if applicable.
- 4.7.14 Contractor shall terminate all signal and command copper wiring on cabling installed in Scalable IBS and NAV upgrade equipment with crimped ferrule type connectors.
- 4.7.15 Contractor shall attend all on-site daily meetings between MSR, RMC, Ship's Force and NSWCPD as required.
- 4.7.16 Contractor shall install, dress in and terminate all cabling into all Scalable IBS and NAV upgrade equipment and any associated auxiliary equipment or connection boxes.
- 4.7.17 The contractor shall provide the services of one (1) senior engineering technician, if required. He/she shall be responsible for correcting problems as they arise after the installation has been completed and before the installation has been checked out of RMMCO.
- 4.8 Submit the following reports upon completion of the installation and hardware:
 - 4.8.1 An Installation Completion Report upon completion of the installation. This report will include the following as applicable: pre- and post-installation test results, updates and/or changes to ILS and hardware requirements, recommendations, dates and names of personnel making ILS entries, SNAP data entry receipts (OPNAV Form 4790/CK) and general data such as ship name, location, date(s) and points of contact for ILS delivery aboard the ship. All identified impacted ILS changes will be provided to ship prior to departure as per Technical Specification 9090-310G.
 - 4.8.2 Bi-weekly financial and technical progress reports shall be provided on all tasks with the funding and task completion percentages. All identified disconnects between work completion and money spent will be addressed.

5.0 DELIVERABLES/SCHEDULE

- 5.1 Quality Assurance workbook to be provided 30 days prior to the start of an installation and delivered within two (2) weeks at the completion of the installation (Para 4.2, CRDL A004).
- 5.2 Detailed Installation Milestone Schedule (POA&M) will be submitted within twenty (20) working days after contract award. Updates will be submitted daily to NSWCPD representative tracking progress. Format shall track progress agreement/discrepancy with POA&M (Para 4.3,CRDL A003).
- 5.3 Bi-weekly material status report will be provided to the OSIC detailing order status, long lead-time material list and estimated delivery dates (Para 4.5-6, CRDL A011).
- 5.4 Installation Completion Report will be submitted after completion of the installation (Para 4.8.1, CRDL A014).
- 5.5 Bi-weekly financial and technical progress reports will be provided to NSWCPD AIT Manager on all tasks with funding and task completion percentages. This report should detail number of foundations and equipment installed, equipment and cables connected, tested, and completion percentage versus time expired. All identified disconnects between work completion and money spent will be addressed. (Para 4.8.2, CRDL A002)

6.0 SCHEDULE

6.1 The installation preparation will commence immediately upon Delivery Order award. Installations are planned for the following timeframes; however, final installation schedules will be determined by the RMC, TYCOM and port engineer.

21 July - 19 Oct 2016 3 Oct - 4 Nov 2016 9 Jan - 27 Jan 2017

7.0 GOVERNMENT FURNISHED INFORMATION/MATERIAL

- 7.1 NSWCPD will provide available PC Scalable IBS and NAV upgrades ship installation drawings and associated documentation as they become available
- 7.2 Government Furnished Material, marked as GFM, can be found in references 3.23 through 3.33.

8.0 CONTRACTOR FURNISHED MATERIAL

8.1 The contractor shall provide all material marked as Installing Activity Furnished, or IAF, and incidental installation material unless otherwise specified. All IAF material can be found in references 3.23 through 3.33.

9.0 TRAVEL

9.1 Three (3) PC Installations – Norfolk, VA to Mayport, FL:

People	13
Days	30
Trip(s)	3

9.2 Three (3) PC Ship Checks – Norfolk, VA to Mayport, FL:

People	1
Days	7
Trip(s)	3

This Statement of Work is for Scalable Integrated Bridge System and Navigation upgrade installations on three (3) ships.

10.0 CLASSIFIED MATERIAL

10.1 None.

11.0 PERIOD OF PERFORMANCE

11.1 From Delivery Order award date to 12/30/2017.

12.0 PLACES OF PERFORMANCE

12.1 It is anticipated that the place of performance shall be:

Mayport, Florida

13.0 OVERTIME

Overtime is requested for the installation team in order to complete the installation within the periods of availability of the ship.

14.0 CONTRACTING OFFICER'S REPRESENTATIVE (COR)

14.1 The COR for this Delivery Order is Mr. (b) (6) NSWC Code (b) Philadelphia, PA (b) (6)

15.0 TECHNICAL POINT OF CONTACT (TPOC)

- 15.1 The TPOC for this Delivery Order is Mr. (b) (6) NSWCPD Code (b) Philadelphia, PA. PHONE: (b) (6)
- 15.2 The alternate TPOC for this Delivery Order is Mr. (b) (6) NSWCPD Code 213, Philadelphia, PA. PHONE: (b) (6) EMAIL: (b) (6)

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0002	Destination	Government	Destination	Government
0002AA	Destination	Government	Destination	Government
0002AB	3 Destination	Government	Destination	Government
0004	Destination	Government	Destination	Government
0004AA	Destination	Government	Destination	Government
0004AB	3 Destination	Government	Destination	Government
0005	Destination	Government	Destination	Government

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	DODAAC
0002	N/A	N/A	N/A	N/A
0002AA	A POP 12-JUL-2016 TO 30-DEC-2017	N/A	NAVAL SURFACE WARFARE CENTER PHILA (b) (6) NSWC PHILADELPHIA DIVISION NSLC DETACHMENT 1601 LANGLEY AVE, (b) (6) PHILADELPHIA PA 19112-5051 (b) (6) FOB: Destination	N64498
0002AE	3 POP 12-JUL-2016 TO 30-DEC-2017	N/A	(SAME AS PREVIOUS LOCATION) FOB: Destination	N64498
0004	N/A	N/A	N/A	N/A
0004AA	A POP 12-JUL-2016 TO 30-DEC-2017	N/A	NAVAL SURFACE WARFARE CENTER PHILA (b) (6) NSWC PHILADELPHIA DIVISION NSLC DETACHMENT 1601 LANGLEY AVE, (b) (6) PHILADELPHIA PA 19112-5051 (b) (6) FOB: Destination	N64498
0004AE	3 POP 12-JUL-2016 TO 30-DEC-2017	N/A	(SAME AS PREVIOUS LOCATION) FOB: Destination	N64498
0005	POP 12-JUL-2016 TO 30-DEC-2017	N/A	(SAME AS PREVIOUS LOCATION) FOB: Destination	N64498

Section G - Contract Administration Data

FUNDING

This delivery order has hereby been awarded for \$1,150,869.53 and funded in the amount of (b) (4) . As a result, the total amount of funding obligated and available for payment under this order is (b) (4) . It is estimated that the funding under this order will cover the cost of performance through 30 September 2016. In accordance with contract clause 52.232-22, Limitation of Funds, the Government is not obligated to reimburse the contractor for any costs incurred in excess of (b) (4) unless additional funds are made available and obligated under this order in a subsequent modification. The total unfunded balance remaining is \$1,050,869.53 based on the total delivery order value.

ACCOUNTING AND APPROPRIATION DATA

AA: 1761810 81LT 310 VU021 0 050120 2D 000000

COST CODE: A10003499786

AMOUNT: (b) (4) CIN 130057971900005: (b) (4)

CIN 130057971900006:

Section J - List of Documents, Exhibits and Other Attachments

ATTACHMENTS

The following attachments will be uploaded into EDA:

- 1) Government Furnished Material Lists
 - a. Patrol Craft ECDIS
 - b. Patrol Craft NAV

2) CDRLs

- a. A004 Quality Assurance Workbook
- b. A002 Bi-weekly Financial and Technical Progress Reports
- c. A003 Installation Milestone Schedule (POA&M)
- d. A011 Bi-weekly Material Status Report
- e. A014 Installation Completion Report